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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,295	04/01/2004	Anthony F. Johnson	43384-32838	8378

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EXAMINER
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PUNNOOSE, ROY M

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/815,295

Applicant(s)

JOHNSON ET AL.

Examiner

Roy M. Punnoose

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/6/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The recitation “resilient seal” in the claims make the claims vague and indefinite because resilience is not quantified. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8, 21 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Harner (US\_6,118,520).
5. Claim 1 is rejected because Harner teaches of an optic probe 20 comprising a tubular body 50 having a hollow interior with a center axis and an axial length with opposite proximal and distal ends (see Figure 1), an optical sensing element 22 at the distal end 54 of the tubular body 50 and a resilient seal 60 (see col.5, line 64 – col.6, line18) between the optical sensing element 22 and the distal end 54 of the tubular body 20 sealing the interior of the tubular body from an exterior environment of the probe 20 (see col.2, line 43- col.3, line 37, and Figures 1 and 2).

6. Claim 2 is rejected because Harner teaches that the seal 60 engaging around a portion of the optical sensing element (see col.3, lines 19-21, and Figure 2).
7. Claim 3 is rejected because Harner teaches that the tubular body 50 having an interior surface that surrounds the hollow interior and the seal 60 engaging against the interior surface (see col.3, lines 19-21, and Figure 2).
8. Claim 4 is rejected because Harner teaches that the seal 60 being compressed between the optical sensing element and the tubular body (see col.3, lines 20-37 and Figure 2).
9. Claim 5 is rejected because Harner teaches that the optical sensing element being a reflective crystal (see col.4, lines 58-60) having at least two surface areas that are oriented at an angle to each other (see col.4, lines 28-49).
10. Claim 6 is rejected because Harner teaches that at least a portion of the optical sensing element having a conical shape (see col.4, lines 42-44).
11. Claim 7 is rejected because Harner teaches that at least a portion of the optical sensing element having a frustum shape (see col.4, lines 41-49 and Figures 4 and 5).
12. Claim 8 is rejected because Harner teaches that a plurality of fiber optic cables 24, 34 extending through the interior of the tubular body 50, each cable having a proximal end adjacent the tubular body proximal end and an opposite distal end adjacent the tubular body distal end, and an optical assembly (see Figure 2) inserted into the tubular body 50 interior adjacent the tubular body distal end, the optical assembly having a plurality of holes 78, 80 extending axially through the optical assembly and the distal ends of the plurality of fiber optic cables 24, 34 being positioned and supported in the plurality of holes 78, 80 (see col.3, lines 39-48).

13. Claim 21 is rejected because Harner teaches of the resilient seal 60 being an o-ring (see col.3, line 21).
14. Claim 25 is rejected for the same reasons of rejecting claims 1-8 above because it claims identical limitations as that of claims 1-8.
15. Claim 26 is rejected for the same reasons of rejecting claim 7 above.
16. Claim 27 is rejected for the same reasons of rejecting claim 8 above.

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 9-12, 18-20, 22, 28-30 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harner (US\_6,118,520) in view of Schar et al (US\_4,826,313).
19. Claims 9-12 and 28-30 are rejected because:
  - A. Harner teaches all claim limitations as disclosed above except for a temperature sensor and a pressure sensor in the interior of the probe's tubular body interior for measuring/detecting temperature and pressure when said probe is in a fluid/solution whose dispersion characteristics are to be determined by said probe.
  - B. Schar et al (Schar hereinafter) teaches of method comprising using an apparatus/probe based on the principle of attenuated total reflection as sensor system, in which Schar indicates the importance of measuring temperature and pressure along with optical

characteristics (see col.1, lines 21-23) of a fluid/solution whose dispersion characteristics are to be determined by said apparatus/probe.

- C. In view of Schar's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a temperature sensor and a pressure sensor into the interior of Harner's probe's tubular body interior for measuring/detecting temperature and pressure when said probe is in a fluid/solution whose dispersion characteristics are to be determined by said probe, so that the optical characteristics of the fluid/solution can be determined at any desired temperature and pressure for improving the accuracy of such measurements.

20. Claims 18-20, 22, and 34-36 are rejected because:

- A. Harner teaches all claim limitations as disclosed above except for a tip guard secured to the tubular body of the probe used for determining dispersion characteristics of a fluid/solution.
- B. Schar teaches of a tip guard (see in the Figure the projected tip guard section along the side of the optical member 1) for protecting the optical element from any damage when the probe is used for determining dispersion characteristics of a fluid/solution.
- C. In view of Schar's teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a tip guard into the Harner's apparatus/probe due to the fact that it would protect the optical element from any damage when the probe is used for determining dispersion characteristics of a fluid/solution.

21. Claims 13-17, 23-24 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harner (US\_6,118,520) in view of Schar et al (US\_4,826,313) and further in view of what is well-known in the art.

Claims 13-17, 23-24 and 31-33 are rejected because the Examiner takes official notice that the limitations of claims 13-17, 23-24 and 31-33 are of mechanical nature which are well-known in the art, and does not provide any significant contribution to applicant's claimed invention, which is an apparatus/probe based on the principle of attenuated total reflection as sensor system comprising a set of optical fibers connected to an optical element that is sealably attached to one end of a tubular probe for optically measuring characteristics of a fluid/solution whose dispersion characteristics are to be determined by said apparatus/probe. Such an apparatus/probe is taught, in combination, by Harner and Schar as detailed above.

#### ***Contact/Status Information***

22. The prior art cited in the accompanying PTO-892 is made of record and not relied upon, is considered pertinent to applicant's disclosure.

23. Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice in this office action. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made. In re Selmi, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); In re Fischer, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If

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applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the **next reply** after the Office action in which the well known statement was made.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Roy M. Punnoose** whose telephone number is **571-272-2427**. The examiner can normally be reached on 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Gregory J. Toatley, Jr.** can be reached on **571-272-2800 ext.77**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 22, 2006

  
**Roy M. Punnoose**  
Patent Examiner  
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